MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2019/2020

DII5614 – PRINCIPLES OF INVESTMENT

(All Sections/Groups)

24 OCTOBER 2019
9.00 AM – 11.00 AM
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of 9 pages with 2 sections.
2. Attempt **ALL** questions.
3. Please write all your answers for Section A on the OMR form provided and all answers for Section B in the Answer Booklet provided.
4. The formulae are given in the appendices.

SECTION A: Multiple Choice Questions (30 Marks)

1. Common shareholders are entitled to the profits that remain after all of the corporation's other obligations have been met. Thus, common shareholders are known as _____.

   A. residual owners
   B. temporary owners
   C. debt owners
   D. owners of last resort

2. Which of the following are benefits related to stock ownership?
   I. Ease of trading.
   II. Attractive inflation-adjusted rates of return.
   III. Guarantee of long-term positive return.
   IV. Affordability.

   A. I and II only.
   B. II and IV only.
   C. I and III only.
   D. I, II and IV only.

3. An individual stock generally provides a _____.

   A. dividend payment that ensures total protection from purchasing power risk
   B. refuge from event risk
   C. lower current income than that available from other types of investments
   D. predictable annual rate of return

4. Since each share of common stock represents ownership in a company, shares of common stock are often referred to as _____.

   A. illiquid investments
   B. equity securities
   C. fixed-income securities
   D. unit-cost securities

Continued...

5. Stocks that are readily available to the general public and that are bought and sold on the open market are known as _____.

A. sustained stocks
B. publicly traded issues
C. treasury stocks
D. split issues

6. When a company, working with an underwriter, offers the investing public a certain number of shares of its stock at a certain price, the company is making what is known as a _____.

A. public offering
B. rights offering
C. stock spin-off
D. treasury offering

7. Which of the following are characteristics of blue-chip stocks?

I. Solid balance sheets.
II. Generous dividend yields.
III. Immunity from bear markets.
IV. Some growth potential.

A. III and IV only.
B. II and III only.
C. I, II and IV only.
D. II, III and IV only.

8. In a rights offering, the _____.

A. existing stockholders are given the first opportunity to purchase new shares in proportion to their current ownership position
B. underwriter offers the investing public a certain number of shares at a certain price
C. total equity remains constant while the number of shares of common stock outstanding increases
D. amount of debt in the capital structure increases by the amount of the rights offering

9. Income stocks are well suited for retirees because _____.

A. dividend income is tax-free
B. the capital gains are predictable
C. dividend yields tend to exceed bond yields
D. dividends tend to increase over time

Continued...

10. When a corporation declares a stock split, it usually does so because _____.

A. the firm's retained earnings are excessive
B. there are too many shares of stock outstanding
C. investors sometimes require nontaxable returns
D. the stock price is too high

11. One of the basic premises of security analysis, and in particular fundamental analysis, is that _____.

A. a stock's price is based on its past cash flows rather than on anticipated future cash flows
B. market sectors do not move in concert with business cycles
C. all securities have an intrinsic value that their market value will approach over time
D. a security's risk has relatively little effect on the security's return

12. The intrinsic value of a security is based on the _____.

I. amount of risk
II. current market value of the security
III. discount rate applicable to the security
IV. estimated future cash flows from the security

A. I and III only.
B. III and IV only.
C. I, II and III only.
D. I, III and IV only.

13. Top-down security analysis _____.

A. starts with the fundamental analysis of a firm
B. includes economic, industry, and fundamental analysis
C. concentrates on the competency of the senior management of a firm
D. centers on the past performance of a firm

14. Which measure of the business cycle represents the market value of all goods and services produced in a country over a twelve-month period?

A. Industrial production index.
B. Money supply.
C. Gross domestic product.
D. Productivity average.

Continued...

15. Which stage of an industry's growth cycle is most influenced by economic events?

A. Initial development.
B. Stability or decline.
C. Mature growth.
D. Rapid expansion.

16. Based on the industry's growth cycle, in which stage will an investor achieve capital gain?

A. Initial development.
B. Mature growth.
C. Stability or decline.
D. Rapid expansion.

17. Which one of the following statements concerning accounting reports is **CORRECT**?

A. The income statement reflects the position of a firm as of a single point in time.
B. The total equity of a firm is equal to the total assets plus the total liabilities.
C. The statement of cash flows identifies both the sources and the uses of cash.
D. The income statement reflects the amount of cash available for investment and financing activities.

18. If investors want to know how much is the profit they will earn on every ringgit they invested, they should be interested in _____ ratio.

A. return on assets
B. current
C. net profit margin
D. return on equity

19. A comparison of a firm's current financial ratios to those of prior years' allows one to _____.

A. accurately predict the future performance of a firm
B. see how a firm's performance compares to that of a competitor
C. see trends that are developing
D. determine if the firm is performing better than the overall industry

Continued...

20. Financial ratios _____.
    I. allow comparisons across firms without concern over firm size
    II. can compare a firm's operating and financial status to industry norms
    III. reflect the future outlook of a firm based on analysts' projections
    IV. look at the liquidity, activity, leverage, profitability and market measures of a firm

    A. II and IV only.
    B. I and II only.
    C. I, II and IV only.
    D. I, II, III and IV.

21. One of the drawbacks when investing in mutual funds is _____.

    A. payment of annual management fee
    B. lack of liquidity of fund shares
    C. high amount required for the initial investment
    D. lack of information on the performance of fund

22. Which of the following characteristics apply to closed-end mutual funds?
    I. Have a limited number of shares.
    II. Market price of the fund's shares is determined by supply and demand.
    III. Sell shares in the fund only at the initial offering.
    IV. Have an unlimited number of shares.

    A. I and IV only.
    B. II and III only.
    C. I, II and III only.
    D. II, III and IV only.

23. An open-end investment company _____.

    A. sells shares at a discounted NAV price
    B. is involved in all trades of its shares
    C. trades like a stock on the exchanges
    D. has a set number of shares

Continued...

24. Which of the following statements is (are) **CORRECT** concerning the exchange-traded funds (ETFs)?
    I. Investor can buy and sell ETFs at any time of the day.
    II. ETFs have low management expenses.
    III. ETFs have high portfolio turnover.
    IV. ETFs are actively managed.

    A. I, II and IV only.
    B. I and II only.
    C. II and III only.
    D. I, III, and IV only.

25. | A mutual fund that charges a commission when shares are bought. |
    |---|

    The above statement is **MOST LIKELY** related to _____.

    A. management fee
    B. load fund
    C. back-end load
    D. 12(b)-1 fee

26. Back-end loads _____.

    A. are charged if an investor sells his or her shares within the first few years
    B. were designed to help no-load funds cover their marketing expenses
    C. are charged when an investor buys their mutual fund shares
    D. encourage short-term trading

27. A type of fund that invests in real estate and/or mortgages is known as a _____.

    A. sector fund
    B. hedge fund
    C. Real Estate Investment Trusts (REIT)
    D. Exchange-Traded Funds (ETF)

Continued...

28. Which of the following statements is (are) **CORRECT** concerning hedge funds?
    I. They are highly regulated.
    II. General partners are the only investors.
    III. Management and other fees are extremely low compared to other types of funds.
    IV. Access is limited to institutions and high net worth or high income individuals.

    A. I, II and III only.
    B. II and IV only.
    C. IV only.
    D. I, II, III, and, IV.

29. Risk-seeking investors who seek maximum capital appreciation with little current income should invest in _____.

    A. value funds
    B. growth funds
    C. aggressive growth funds
    D. equity-income funds

30. _____ is an investment with tax-exempt securities issued by states and political subdivisions.

    A. Money market funds
    B. Municipal bond funds
    C. Government bond funds
    D. Real Estate Investment Trusts (REIT)

(Total: 30 marks)

Continued...

SECTION B: Structured Questions (70 Marks)

QUESTION 1

(a) Differentiate between debt, equity and derivative securities. Provide **ONE (1)** example each. (4.5 marks)

(b) Maya bought 500 shares of stock at RM6.30 per share on 75 percent margin. Assume Maya holds the stock for two years and her interest costs will be RM250 over that period. On top of that, Maya also received dividends of RM1 per share. Calculate:

i. Equity margin. (3 marks)

ii. New margin position if Maya sells the stock at RM7.50 a share. (7.5 marks)

iii. Based on your answer in (ii), what will be the margin call if bank would like to maintain an 85 percent margin? Calculate the new debit balance. (2.5 marks)

(Total: 17.5 marks)

QUESTION 2

(a) List **FOUR (4)** internal and **FOUR (4)** external key factors that affect the return of one's investment. (8 marks)

(b) Define Holding Period Return (HPR). (2 marks)

(c) Marilyn purchased a bond for RM3,800. The bond pays interest of RM450 every 4 months. She sells the bond after 12 months at RM4,600. Calculate its Holding Period Return (HPR). (5 marks)

(d) The market currently is paying 4.55 percent real rate of return with expected inflation of 5.65 percent. What is the required rate of return if the market risk premium is 3.65 percent? (2.5 marks)

(Total: 17.5 marks)

Continued...

QUESTION 3

(a) Below is Nazmi's portfolio, which consists of three stocks.

Stock name	Proportion of portfolio	Stock Beta (β)	Annual returns (%)
P2Y	RM15,000	2.4	15
B6F	RM25,000	1.6	8
G5D	RM10,000	1.8	12

i. Compute the total portfolio beta for Nazmi. (5.5 marks)

ii. Compute the total portfolio returns for Nazmi. (4 marks)

iii. If Nazmi is a conservative investor, based on your answer in part (i), will he proceed with this portfolio? Justify your answer. (1.5 marks)

(b) There are two approaches in constructing portfolios, which are the Traditional Approach and Modern Portfolio Theory. Identify **THREE (3)** differences of these two approaches. (6 marks)

(Total: 17 marks)

QUESTION 4

(a) Explain the term "Equity Kicker". (2 marks)

(b) List down the **TWO (2)** major types of convertible securities. (1 mark)

(c) Based on the table below, compute:

i. Yield to call for each bond. (7.5 marks)
ii. Yield to maturity for each bond. (7.5 marks)

Bond	**Coupon rate (%)**	**Years to maturity**	**Years to call**	**Call price**	**Bond price (RM)**
DDF	8	25	18	1,200	1,400
MML	13	15	9	1,350	1,600
PTR	10	10	7	950	1,200

(Total: 18 marks)

End of Paper

Appendices

1. Margin $= \frac{V-D}{V}$

2. Return on invested capital from a margin transaction

$$= \frac{\text{Total current income received} - \text{Total interest paid on margin loan} + \text{Capital gain/loss}}{\text{Amount of equity at purchase}}$$

3. Risk-free rate = Real rate of return + Expected inflation premium

4. Required return on investment j = Risk-free rate + Risk premium for investment j

5. HPR $= \frac{\text{Income during period} + \text{Capital gain/loss during period}}{\text{Beginning investment value}}$

6. $FV = PV\,(1 + r\,)^n$

7. $D_1 = D_0\,(1 + g\,)^n$

8. Standard Deviation $= \sqrt{\frac{\sum_{t=1}^{n}(ri - \bar{r})^2}{n-1}}$

9. Portfolio return $= \sum_{j=1}^{n}(w_j \times r_j)$

10. $r_j = R_F + [\, b_j \times (r_m - R_F)\,]$

11. Portfolio beta $= \sum_{j=1}^{n}(w_j \times b_j)$

12. EPS $= \frac{\text{Net Income} - \text{Preferred dividends}}{\text{Number of shares of common stock outstanding}}$

13. Dividend yield $= \frac{\text{Anual dividends received per share}}{\text{Current market price of the stock}}$

14. Dividend payout ratio $= \frac{\text{Dividends per share}}{\text{Earnings per share}}$

15. Total returns

= Current income + Capital gains/losses ± Changes in currency exchange rates

16. Current ratio $= \frac{\text{Current assets}}{\text{Current liabilities}}$

17. Net working capital = Current assets – Current liabilities

18. Accounts receivable turnover = $\frac{\text{Annual sales}}{\text{Accounts receivable}}$

19. Inventory turnover = $\frac{\text{Annual sales}}{\text{Inventory}}$

20. Total asset turnover = $\frac{\text{Annual sales}}{\text{Total assets}}$

21. Debt-equity ratio = $\frac{\text{Long-term debt}}{\text{Stockholders' equity}}$

22. Time interest earned = $\frac{\text{EBIT}}{\text{Interest expenses}}$

23. Net profit margin = $\frac{\text{Net profit after taxes}}{\text{Total revenue}}$

24. ROA = $\frac{\text{Net profit after taxes}}{\text{Total assets}}$

25. ROE = $\frac{\text{Net profit after taxes}}{\text{Stockholders' equity}}$

26. P/E = $\frac{\text{Net price of common stock}}{\text{EPS}}$

27. PEG ratio = $\frac{\text{Stock's P/E ratio}}{\text{3-to-5 year growth rate in earnings}}$

28. Dividend per share = $\frac{\text{Annual dividend paid to common stock}}{\text{Number of common shares outstanding}}$

29. Payout ratio = $\frac{\text{Dividends per share}}{\text{Earnings per share}}$

30. Book value per share = $\frac{\text{Common stockholders' equity}}{\text{Number of common shares outstanding}}$

31. Price-to-book-value = $\frac{\text{Market price of common stock}}{\text{Book value per share}}$

32. Taxable equivalent yield = $\frac{\text{Yield on municipal bond}}{\text{1-Federal tax rate}}$

33. Taxable equivalent yield for both federal and state taxes

$$= \frac{\text{Municipal bond yield}}{1-[\text{Federal tax rate} + \text{state tax rate } (1 - \text{Federal tax rate})]}$$

34. Conversion value = Conversion ratio x Current market price of the stock

35. $\text{Conversion equivalent} = \frac{\text{Current market price of the convertible bond}}{\text{Conversion ratio}}$

36. Conversion premium (in RM)

= Current market price of the convertible bond – Conversion value

37. $\text{Conversion premium (in \%)} = \frac{\text{Conversion premium (in RM)}}{\text{Conversion value}}$

38. Payback period =

$$\frac{\text{Conversion premium (in RM)}}{\text{Annual interest income from the convertible bond} - \text{Annual dividend income from the underlying common stock}}$$

39. $\text{Current yield} = \frac{\text{Annual interest income}}{\text{Current market price of the bond}}$

40. $\text{Yield to maturity} = \frac{\text{Annual interest} + \frac{\text{Par value} - \text{Market price}}{\text{Number of years to maturity}}}{\frac{\text{Par value} + \text{market price}}{2}}$

41. $\text{Yield to call} = \frac{\text{Annual interest} + \frac{\text{Call price} - \text{Market price}}{\text{Number of years to call}}}{\frac{\text{Call price} + \text{market price}}{2}}$

42. $\text{Premium (or discount)} = \frac{\text{Share price} - \text{NAV}}{\text{NAV}}$

43. HPR =

$$\frac{(\text{Number of shares at end of period x Ending price}) - (\text{Number of shares at beginning of period x Initial price})}{\text{Number of shares at beginning of period x Initial price}}$$

44. $\text{NAV} = \frac{\text{Fund assets} - \text{Fund liabilities}}{\text{Number of units outstanding}}$